



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/691,450

10/23/2003

Scott Hanggie

306212.01/MFCP.140739

6405

45809

7590

10/02/2008

SHOOK, HARDY & BACON L.L.P.  
(c/o MICROSOFT CORPORATION)  
INTELLECTUAL PROPERTY DEPARTMENT  
2555 GRAND BOULEVARD  
KANSAS CITY, MO 64108-2613

EXAMINER

AMIN, JWALANT B

ART UNIT

PAPER NUMBER

2628

MAIL DATE

DELIVERY MODE

10/02/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/691,450	<b>Applicant(s)</b> HANGGIE ET AL.	
	<b>Examiner</b> JWALANT AMIN	<b>Art Unit</b> 2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,7-11,15-22,27-31 and 37-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,7-11,15-22,27-31 and 37-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-2, 7-11, 15-22, 27-31 and 37-48 have been considered but are moot in view of the new ground(s) of rejection.
2. Regarding claim 1, the applicant argues that Jaguar does not teach "...receiving, at a desktop window manager (DWM), application content from legacy applications in a top-to-bottom order to display the application content received in a top-to-bottom order in a window corresponding to the legacy application in the graphical user interface; stripping out application content received from the legacy applications; converting the stripped application content to a graphical representation; switching between the CDWM and the DWM to render the advanced application content and legacy application content" (see pg. 13-14 of applicant's remarks). The applicant repeats the above arguments for claim 21 (see pg. 17-18), and further argues that "... nothing in Jaguar teaches redirecting application content from the DWM to the CDWM to render content in a graphical user interface" (see pg. 18).
3. However, the examiner interprets that Jaguar teaches receiving, at a desktop window manager (DWM) (QuickDraw), application content information from legacy applications (Carbon/Cocoa application) (picture window is a Carbon application which uses QuickDraw's drawing methods and text window is a Cocoa application which uses Quartz2D, Erickson: pg. 1 last two lines and pg. 2 first four paragraphs; QuickDraw handles text, vector graphics and bitmapped images, and then send them to the screen and output devices, Morgenstern: pg. 1 fourth paragraph; QuickDraw is a legacy API

Art Unit: 2628

from classic Mac OS, Lyons: pg. 1; all of the bitmapped data produced by Quartz 2D, QuickDraw, QuickTime, and OpenGL is passed on to the Quartz Compositor for eventual display on the screen, Siracusa: pg. 1 seventh paragraph, pg. 3 second paragraph and figure on pg. 3 and 4; Carbon applications use QuickDraw, Apple2: pg. 25) in a top-to-bottom order (application content in the form of a print job specifies the layout direction left to right then top to bottom, Apple2: pg. 14; it should be noted that left to right then top to bottom is functionally equivalent to top to bottom order; print job consists of drawing commands and printing system can receive drawing commands from an application in several ways including Carbon applications using QuickDraw, Apple2: pg. 24-25) to display the application content in a top-to-bottom order (QuickDraw renders in top-to-bottom order, Lipton: pg. 4 figure 3 and pg. 5 first three lines) in windows corresponding to the legacy application in the graphics user interface;

stripping out application content from the legacy window content (QuickDraw receives the picture content from the picture window of the Carbon application, Erickson: pg. 1 last two lines and pg. 2 first three lines);

converting the application content to a graphical representation of the application content (QuickDraw generates the graphical representation of the application data using it's drawing methods; picture window is a Carbon application which uses QuickDraw's drawing methods and text window is a Cocoa application which uses Quartz2D, Erickson: pg. 1 last two lines and pg. 2 first four paragraphs; QuickDraw handles text, vector graphics and bitmapped images, and then send them to the screen and output

Art Unit: 2628

devices, Morgenstern: pg. 1 fourth paragraph; QuickDraw is a legacy API from classic Mac OS, Lyons: pg. 1);

switching between the CDWM and the DWM to render the advanced application content and legacy application (Cocoa application that uses Quartz 2D does not provide all the needed functionality, so there is a switching between Quartz and QuickDraw for some things, Lyons: pg. 1; picture window is a Carbon application which uses QuickDraw's drawing methods and text window is a Cocoa application which uses Quartz2D, Erickson: pg. 1 last two lines and pg. 2 first four paragraphs; it should be noted that all of the bitmapped data produced by QuickDraw is passed on to the Quartz Compositor for eventual display on the screen as taught by Siracusa is considered to be functionally equivalent to the legacy DWM redirecting the application content to the CDWM, Siracusa: pg. 1 seventh paragraph, figure on pg. 3 and 4; Quartz compositor is responsible for the composition and display of graphics rendered by Quartz2D, OpenGL and QuickTime libraries, Roussel: pg. 118, section Quartz Compositor).

4. Regarding claim 44, the applicant argues that Jaguar fails to teach "...an instance of a legacy application program providing legacy window information to a legacy desktop window manager (DWM); stripping out client content from the legacy window information; converting the client content to a raster image of the client content" (see pg. 15).

5. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically

Art Unit: 2628

pointing out how the language of the claims patentably distinguishes them from the references.

Further, the examiner interprets that Jaguar teaches the instance of the legacy application program (Carbon/Cocoa application) providing legacy window information to a legacy desktop window manager (QuickDraw); stripping out client content from the legacy window information (QuickDraw receives the picture content from the picture window of the Carbon application, Erickson: pg. 1 last two lines and pg. 2 first three lines); converting the client content to raster image of the client content (QuickDraw generates the graphical representation of the application data using it's drawing methods; picture window is a Carbon application which uses QuickDraw's drawing methods and text window is a Cocoa application which uses Quartz2D, Erickson: pg. 1 last two lines and pg. 2 first four paragraphs; QuickDraw handles text, vector graphics and bitmapped images, and then send them to the screen and output devices, Morgenstern: pg. 1 fourth paragraph; QuickDraw is a legacy API from classic Mac OS, Lyons: pg. 1), a compositing desktop window manager (CDWM) (Quartz 2D and Quartz compositor) drawing a window to a buffer memory (Siracusa: pg. 1 last paragraph, pg. 2 first two paragraphs and figure on pg. 3), wherein the CDWM renders the window by applying a texture to a mesh (window/polygon) (it should be noted that a mesh according to the specification is 2D or 3D primitive, see paragraph [0015] on pg. 15; it should be further noted that each window is treated as an OpenGL surface and the texture is mapped onto that surface, Siracusa: pg. 3 second paragraph and pg. 4 first five lines) (the window server, now an OpenGL application itself, retains the resulting

Art Unit: 2628

bitmaps as textures on polygons in an OpenGL scene and composites them into a pleasing, cohesive final image on the screen, Siracusa: pg. 3 second paragraph), and wherein the texture comprises the raster image (bitmap) of the client content and the default non-client information (bitmap includes translucency and anti-aliasing information, Siracusa: pg. 1 last paragraph, pg. 2 first two paragraphs, pg. 3 second paragraph, pg. 4 first paragraph; it should be noted that Cocoa application that uses Quartz 2D does not provide all the needed functionality, so there is a switching between Quartz and QuickDraw for some things, Lyons: pg. 1; picture window is a Carbon application which uses QuickDraw's drawing methods and text window is a Cocoa application which uses Quartz2D, Erickson: pg. 1 last two lines and pg. 2 first four paragraphs; all of the bitmapped data produced by QuickDraw is passed on to the Quartz Compositor for eventual display on the screen, Siracusa: pg. 1 seventh paragraph, figure on pg. 3 and 4; Quartz compositor is responsible for the composition and display of graphics rendered by Quartz2D, OpenGL and QuickTime libraries, Roussel: pg. 118, section Quartz Compositor).

6. Regarding claims 42 and 43, the applicant argues that Jaguar and Solazzi fail to teach "... receiving, at a compositing desktop window manager, application content in reverse z-order to display in a window ... the compositing desktop manager is configured to provide transparency, shadows, lighting effects, bump mapping and environment mapping" (see pg. 20-21).

7. However, the examiner interprets that Jaguar, in view of Solazzi, in view of Whitman, in view of Fowler, and further in view of Ben-Shachar teaches the above limitations. Please refer to the rejection of claims 42 and 43 for details.

8. Regarding claim 41, the applicant argues that Jaguar, Solazzi and Whitman fail to teach "... receiving application content in reverse z-order to display in a window ... the compositing desktop manager is configured to provide transparency, shadows, lighting effects, bump mapping and environment mapping" (see pg. 22-23).

9. However, the examiner interprets that Jaguar, in view of Solazzi, in view of Whitman, and further in view of Fowler teaches the above limitations. Please refer to the rejection of claim 41 for details.

10. Regarding claim 45, the applicant argues that Jaguar, Farrah and Meagher fails to teach "...dividing the mesh into three regions per mesh dimension; for each region, maintaining offsets of mesh vertices in any dimension by which the region is bounded by a bounding box of the window, and scaling mesh vertices in any dimension by which the region is not bounded by the bounding box of the window" (see pg. 25).

11. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

However, in this instant case, the examiner interprets that Jaguar teaches the limitations as stated above, except that Jaguar does not explicitly teach receiving user input to resize the window and dividing the mesh into the three regions per mesh



Art Unit: 2628

dimension. However, Farrah teaches to resize the window by dividing it into several equally sized and not equally sized regions based on the user input (fig. 21a-c, fig. 22a-c, [0225-0227], [0231-0235]; it should be noted that selecting the number of rows as "3" will divide the window in nine equal-sized regions; it should be noted that dividing window is functionally equivalent to resizing the window; it should be noted that the window is being divided along x and y dimensions). Therefore, it would have been obvious to one of ordinary skill in art at the time of present invention to divide a window mesh into several regions as taught by Farrah and apply it into the method of Jaguar because such regions are commonly used in computer programs which are used to generate artworks, drawings and flow charts ([0006]).

Although the combination of Jaguar and Farrah teach the limitations as stated above, they do not explicitly teach for each region, maintaining offsets of mesh vertices in any dimension by which the region is bounded by a bounding box of the window, and scaling mesh vertices in any dimension by which the region is not bounded by the bounding box of the window. However, Meagher shows offsets (maintaining offsets of mesh vertices) from each line correspond to vertices of each of the four windows, and the critical vertices for a window overlay selected from 3 x 3 array may be calculated by adding offsets (scaling the vertices) as a function of the value in x and y directions (fig. 6a-f, fig. 23a-e, col. 8 lines 31-51, col. 58 lines 64-67, col. 59 lines 1-15, col. 60 lines 3-21 and lines 56-67, col. 61 lines 1-17). Therefore, it would have been obvious to one of ordinary skill in art at the time of present invention to scale the vertices as taught by Meagher and apply it into the method of Jaguar and Farrah because such a method

Art Unit: 2628

scales the three-dimensional universe relative to the three-dimensional coordinate system using the independent scaling factors for each of the x, y and z directions input by floating point multiplication on the microcomputer (col. 60 lines 56-60).

***Claim Rejections - 35 USC § 101***

12. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

13. Claims 44 and 45-48 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

14. Claims 44 and 45-48 are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claims recite a series of steps or acts to be performed, a statutory “process” under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. The instant claims neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

***Claim Rejections - 35 USC § 102***

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2628

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

16. Claims 1, 7-16, 19 and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Mac OS X v 10.2 “Jaguar” (Mac OS X version 10.2 by Apple; release date August 24, 2002; hereinafter Jaguar).

Mac OS X version 10.2, released on August 24, 2002, is an updated version of Mac OS X version 10.1. The features incorporated in Mac OS X version 10.2 are demonstrated using references by David Morgenstern (Under the desktop: Prospecting for Quartz in Mac OS X;

<http://www.creativepro.com/story/feature/17439.html?origin=story>; August 22, 2002;

pgs. 1-4; hereinafter Morgenstern), Apple (Apple Introduces “Jaguar,” the Next Major Release of Mac OS X; <http://www.apple.com/pr/library/2002/jul/17jaguar.html>; July 17,

2002; pgs. 1-3), Moki (Aqua help in Nvidia GeForce 4 [Archive] – AppleInsider;

<http://forums.appleinsider.com/archive/index.php/t-1122.html>; January 28, 2002; pg. 1),

John Siracusa (Mac OS X 10.2 Jaguar; <http://arstechnica.com/reviews/os/macosex-10.2.ars/8>; September 5, 2002; pgs. 1-5; hereinafter Siracusa), Shawn Erickson

(Screenshot PDF; [http://www.omnigroup.com/mailman/archive/macosex-talk/2002-](http://www.omnigroup.com/mailman/archive/macosex-talk/2002-July/071171.html)

[July/071171.html](http://www.omnigroup.com/mailman/archive/macosex-talk/2002-July/071171.html); July 30, 2002; hereinafter Erickson), Torrey Lyons (Re: MacOS X;

<http://www.xfree86.org/pipermail/forum/2003-July/003741.html>; July 9, 2003; hereinafter

Lyons), Roussel (Ametista: a mini-toolkit for exploring new window management

techniques; August 2003), Portuesi et al. (Displaying In-Memory Video Using OpenGL;

<http://www.lurkertech.com/lq/ogl.video.html>; October 16, 2002; hereinafter Portuesi),

Lindberg (2D Graphics Using Quartz; <http://oops.se/cgi->

Art Unit: 2628

[bin/wiki?action=browse&diff=1&id=WwdcRapport2001/TwoDGraphicsUsingQuartz](http://bin/wiki?action=browse&diff=1&id=WwdcRapport2001/TwoDGraphicsUsingQuartz); May 22, 2001), Lipton (QuickDraw GX for Postscript programmers; [http://www.mactech.com/articles/develop/issue\\_15/051-070\\_Lipton\\_final.html](http://www.mactech.com/articles/develop/issue_15/051-070_Lipton_final.html); August 19, 2000), and Apple Computers (About the Mac OS X Printing System; December 11, 2002; hereinafter Apple2) to depict the features incorporated in Mac OS X version 10.2.

It should be noted that material published after the file date of an application referring to program released before file date can be used in art rejection. See *In re Epstein* 31 USPQ2d 1817.

17. Regarding claim 1, Jaguar teaches a computer implemented method for rendering a desktop window in a graphical user interface of an operating system shell, comprising:

receiving, at a compositing desktop window manager (CDWM) (Quartz 2D, OpenGL, QuickTime and Quartz compositor; Quartz compositor is just another OpenGL application, Roussel: page 118, section Quartz Compositor; receiving the application content is taught by Morgenstern: pg. 1 last paragraph, pg. 3 third and fourth paragraphs, and Siracusa: pg. 1 seventh paragraph, pg. 2 last line, pg. 3 first five lines and figure on pg. 3 and 4) application content from advance applications in a bottom-to-top order (video from VL is passed on to OpenGL by converting it into bottom-to-top orientation from top-to-bottom orientation, Portuesi: pg. 2-3), to display the application content received in a bottom-to-top order in windows (openGL renders in bottom-to-top orientation, Portuesi: pg. 2; Quartz 2D renders drawing primitives, PDF documents, text and images using bottom-to-top operation, Lindberg: pg. 1) corresponding to the

Art Unit: 2628

advanced applications in the graphical user interface (Quartz compositor takes information from the rendering component and writes it on the screen, Morgenstern: pg. 1 last paragraph);

receiving, at a desktop window manager (DWM) (QuickDraw), application content information from legacy applications (Carbon/Cocoa application) (picture window is a Carbon application which uses QuickDraw's drawing methods and text window is a Cocoa application which uses Quartz2D, Erickson: pg. 1 last two lines and pg. 2 first four paragraphs; QuickDraw handles text, vector graphics and bitmapped images, and then send them to the screen and output devices, Morgenstern: pg. 1 fourth paragraph; QuickDraw is a legacy API from classic Mac OS, Lyons: pg. 1; all of the bitmapped data produced by Quartz 2D, QuickDraw, QuickTime, and OpenGL is passed on to the Quartz Compositor for eventual display on the screen, Siracusa: pg. 1 seventh paragraph, pg. 3 second paragraph and figure on pg. 3 and 4; Carbon applications use QuickDraw, Apple2: pg. 25) in a top-to-bottom order (application content in the form of a print job specifies the layout direction left to right then top to bottom, Apple2: pg. 14; it should be noted that left to right then top to bottom is functionally equivalent to top to bottom order; print job consists of drawing commands and printing system can receive drawing commands from an application in several ways including Carbon applications using QuickDraw, Apple2: pg. 24-25) to display the application content in a top-to-bottom order (QuickDraw renders in top-to-bottom order, Lipton: pg. 4 figure 3 and pg. 5 first three lines) in windows corresponding to the legacy application in the graphics user interface;

stripping out application content from the legacy window content (QuickDraw receives the picture content from the picture window of the Carbon application, Erickson: pg. 1 last two lines and pg. 2 first three lines);

converting the application content to a graphical representation of the application content (QuickDraw generates the graphical representation of the application data using it's drawing methods; picture window is a Carbon application which uses QuickDraw's drawing methods and text window is a Cocoa application which uses Quartz2D, Erickson: pg. 1 last two lines and pg. 2 first four paragraphs; QuickDraw handles text, vector graphics and bitmapped images, and then send them to the screen and output devices, Morgenstern: pg. 1 fourth paragraph; QuickDraw is a legacy API from classic Mac OS, Lyons: pg. 1);

switching between the CDWM and the DWM to render the advanced application content and legacy application (Cocoa application that uses Quartz 2D does not provide all the needed functionality, so there is a switching between Quartz and QuickDraw for some things, Lyons: pg. 1; picture window is a Carbon application which uses QuickDraw's drawing methods and text window is a Cocoa application which uses Quartz2D, Erickson: pg. 1 last two lines and pg. 2 first four paragraphs; it should be noted that all of the bitmapped data produced by QuickDraw is passed on to the Quartz Compositor for eventual display on the screen as taught by Siracusa is considered to be functionally equivalent to the legacy DWM redirecting the application content to the CDWM, Siracusa: pg. 1 seventh paragraph, figure on pg. 3 and 4; Quartz compositor is

Art Unit: 2628

responsible for the composition and display of graphics rendered by Quartz2D, OpenGL and QuickTime libraries, Roussel: pg. 118, section Quartz Compositor).

and displaying at least a portion of the application content in an opaque content portion of the windows (fully opaque window with transparent sub-parts, Moki: sixth paragraph), the windows having a translucent frame portions (transparent sub-parts such as title bars, shadows, etc., Moki: sixth paragraph; translucent title bars of inactive windows, Morgenstern: pg. 2 third paragraph).

18. Regarding claim 7, Jaguar teaches the CDWM modeling the window by applying a texture to a mesh (window/polygon) (it should be noted that a mesh according to the specification is 2D or 3D primitive, see paragraph [0015] on pg. 15; it should be further noted that each window is treated as an OpenGL surface and the texture is mapped onto that surface, Siracusa: pg. 3 second paragraph and pg. 4 first five lines) (the window server, now an OpenGL application itself, retains the resulting bitmaps as textures on polygons in an OpenGL scene and composites them into a pleasing, cohesive final image on the screen, Siracusa: pg. 3 second paragraph).

19. Regarding claim 8, Jaguar teaches the mesh is defined by a current visual style (each window is drawn according to its position and layering; each window is represented as a bitmap that includes alpha channel and anti-aliasing information; thus the position and layering of each window will give its current alpha channel information, which defines its current visual style; Siracusa: pg. 1 last paragraph).

20. Regarding claim 9, Jaguar teaches the mesh is provided in the application content information (each window and its associated bitmap is provided to the Quartz

Art Unit: 2628

compositor; Siracusa: pg. 1 last two paragraphs, pg. 3 second paragraph and pg. 4 first five lines).

21. Regarding claim 10, Jaguar teaches the texture is defined by a current visual style (each window is drawn according to its position and layering; each window is represented as a bitmap that includes alpha channel and anti-aliasing information; the bitmap that makes up the window's contents is the texture mapped on that surface; thus the position and layering of each window and it's associated bitmap texture will give its current alpha channel information, which defines its current visual style; Siracusa: pg. 1 last paragraph, pg. 3 second paragraph and pg. 4 first five lines).

22. Regarding claim 11, Jaguar teaches the texture is provided in the application content information (each window is drawn according to its position and layering; each window and it's associated bitmap texture is provided to the Quartz compositor to composite them into a pleasing, cohesive final image on the screen; Siracusa: pg. 1 last two paragraphs, pg. 3 second paragraph and pg. 4 first five lines).

23. Regarding claim 15, Jaguar teaches the switching is based on the current visual style (Quartz compositor composites all of the visible window bitmaps with each other according to their position and layers; each window bitmap includes alpha channel and anti-aliasing information, Siracusa: pg. 1 last two paragraphs; pixels displayed belong to one window or the desktop and switch immediately when moving from one window to another, Morgenstern: pg. 2 paragraph two; the front application switches the cursor in response to mousing over an area receiving an mouse moved event and telling the window server to change the cursor; Cocoa NSView's can be set to use a certain cursor



Art Unit: 2628

image whenever the cursor is over them; Cocoa application that uses Quartz 2D does not provide all the needed functionality, so there is a switching between Quartz and QuickDraw for some things based on the current visual style of the area over which mouse is moved, Lyons: pg. 1 and pg. 2 last paragraph).

24. Regarding claim 16, Jaguar teaches the switching is based on a current configuration of a computer on which the method is being performed (Quartz compositor composites all of the visible window bitmaps with each other according to their position and layers; each window bitmap includes alpha channel and anti-aliasing information, Siracusa: pg. 1 last two paragraphs; pixels displayed belong to one window or the desktop and switch immediately when moving from one window to another, Morgenstern: pg. 2 paragraph two; the front application switches the cursor in response to mousing over an area receiving an mouse moved event and telling the window server to change the cursor; Cocoa NSView's can be set to use a certain cursor image whenever the cursor is over them; Cocoa application that uses Quartz 2D does not provide all the needed functionality, so there is a switching between Quartz and QuickDraw for some things based on the current visual style of the area over which the mouse was moved; the visual style of this area is the visual configuration of the computer on which the method is being performed, Lyons: pg. 1 and pg. 2 last paragraph).

25. Regarding claim 19, Jaguar teaches the frame portion is translucent when the window has an input focus (Moki teaches that title bar attached to the window has a

Art Unit: 2628

level of transparency associated with them, so even a fully opaque window has transparent sub-parts such as the title bar, Moki: paragraph five and six).

26. Regarding claim 44, Jaguar teaches the instance of the legacy application program (Carbon/Cocoa application) providing legacy window information to a legacy desktop window manager (QuickDraw); stripping out client content from the legacy window information (QuickDraw receives the picture content from the picture window of the Carbon application, Erickson: pg. 1 last two lines and pg. 2 first three lines); converting the client content to raster image of the client content (QuickDraw generates the graphical representation of the application data using it's drawing methods; picture window is a Carbon application which uses QuickDraw's drawing methods and text window is a Cocoa application which uses Quartz2D, Erickson: pg. 1 last two lines and pg. 2 first four paragraphs; QuickDraw handles text, vector graphics and bitmapped images, and then send them to the screen and output devices, Morgenstern: pg. 1 fourth paragraph; QuickDraw is a legacy API from classic Mac OS, Lyons: pg. 1), a compositing desktop window manager (CDWM) (Quartz 2D and Quartz compositor) drawing a window to a buffer memory (Siracusa: pg. 1 last paragraph, pg. 2 first two paragraphs and figure on pg. 3), wherein the CDWM renders the window by applying a texture to a mesh (window/polygon) (it should be noted that a mesh according to the specification is 2D or 3D primitive, see paragraph [0015] on pg. 15; it should be further noted that each window is treated as an OpenGL surface and the texture is mapped onto that surface, Siracusa: pg. 3 second paragraph and pg. 4 first five lines) (the window server, now an OpenGL application itself, retains the resulting bitmaps as

Art Unit: 2628

textures on polygons in an OpenGL scene and composites them into a pleasing, cohesive final image on the screen, Siracusa: pg. 3 second paragraph), and wherein the texture comprises the raster image (bitmap) of the client content and the default non-client information (bitmap includes translucency and anti-aliasing information, Siracusa: pg. 1 last paragraph, pg. 2 first two paragraphs, pg. 3 second paragraph, pg. 4 first paragraph; it should be noted that Cocoa application that uses Quartz 2D does not provide all the needed functionality, so there is a switching between Quartz and QuickDraw for some things, Lyons: pg. 1; picture window is a Carbon application which uses QuickDraw's drawing methods and text window is a Cocoa application which uses Quartz2D, Erickson: pg. 1 last two lines and pg. 2 first four paragraphs; all of the bitmapped data produced by QuickDraw is passed on to the Quartz Compositor for eventual display on the screen, Siracusa: pg. 1 seventh paragraph, figure on pg. 3 and 4; Quartz compositor is responsible for the composition and display of graphics rendered by Quartz2D, OpenGL and QuickTime libraries, Roussel: pg. 118, section Quartz Compositor).

### ***Claim Rejections - 35 USC § 103***

27. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2628

28. Claims 21, 25-31 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaguar.

29. Regarding claim 21, the statements presented above with respect to claim 1 are incorporated herein.

Although Jaguar teaches the limitations as stated above in claim 1, Jaguar does not explicitly teach a computer readable medium storing computer executable instructions that cause a computer to perform a method of rendering a desktop window in a graphical user interface of an operating system. However, the examiner takes an official notice of the fact that it was known to one of ordinary skill in art at the time of present invention to execute a programmable process stored on use a computer readable medium because by using a portable computer readable medium to store a process that can be executed by the computer allows to perform the execution of the process on any computer and therefore provides portability and reusability.

30. Regarding claim 27, the statements presented above with respect to claims 21 and 7 are incorporated herein.

31. Regarding claim 28, the statements presented above with respect to claims 21 and 8 are incorporated herein.

32. Regarding claim 29, the statements presented above with respect to claims 21 and 9 are incorporated herein.

33. Regarding claim 30, the statements presented above with respect to claims 21 and 10 are incorporated herein.

Art Unit: 2628

34. Regarding claim 31, the statements presented above with respect to claims 21 and 11 are incorporated herein.

35. Regarding claim 39, the statements presented above with respect to claims 21 and 19 are incorporated herein.

36. Claims 18 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaguar, and further in view of Solazzi (US 2003/0107570).

37. Regarding claim 18, although Jaguar teaches the limitations as stated above, Jaguar does not explicitly teach the frame comprises reflective content based on other content in the graphical user interface separate from the window. However, Solazzi teaches a 3D image (window frame) can reflect the surroundings (other content in the graphical user interface separate from the window) ([0008]). Therefore, it would have been obvious to one of ordinary skill in art at the time of present invention to have 3D images with reflective characteristics as taught by Solazzi and apply into Jaguar because such reflective characteristics illustrate the ability of the object to reflect light ([0008]).

38. Regarding claim 38, the statements presented above with respect to claims 21 and 18 are incorporated herein.

39. Claims 17 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaguar, in view of Solazzi, and further in view of Whitman (Technology Terminology, Mike Whitman, May 13, 2001,

Art Unit: 2628

<http://web.archive.org/web/20010513215002/http://bigelowmiddleschool.com/programs/Teched/techterms.html>).

40. Regarding claim 17, although Jaguar teaches the limitations as stated above, Jaguar does not explicitly teach the frame comprises spectral highlights based on a virtual light source. However, Solazzi teaches a 3D image (window frame) can reflect the surroundings ([0008]; it should be noted that Whitman defines spectral highlight as a bright reflection from a light source containing little or no detail; Solazzi teaches a 3D image can display reflective characteristics, and therefore the reflective characteristics of the 3D image of Solazzi also includes spectral highlights which is a bright reflection from a light source). Therefore, it would have been obvious to one of ordinary skill in art at the time of present invention to have 3D images with reflective characteristics as taught by Solazzi and apply into Jaguar because such reflective characteristics illustrate the ability of the object to reflect light ([0008]).

41. Regarding claim 37, the statements presented above with respect to claims 21 and 17 are incorporated herein.

42. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jaguar, in view of Solazzi, in view of Whitman, and further in view of Fowler et al. (US 2002/0180741; hereinafter Fowler).

43. Regarding claim 41, Jaguar teaches a computer implemented method for rendering a desktop window in a graphical user interface of an operating system shell, comprising: receiving application content to display in a window (Quartz compositor

Art Unit: 2628

takes information from the rendering component and writes it on the screen, Morgenstern: pg. 1 last paragraph); and displaying at least a portion of the application content in a content portion of the window having a frame portion (fully opaque window with transparent sub-parts, Moki: sixth paragraph; transparent sub-parts such as title bars, shadows, etc., Moki: sixth paragraph; translucent title bars of inactive windows, Morgenstern: pg. 2 third paragraph). Jaguar further teaches the compositing desktop window manager is configured to provide transparency and shadows (fully opaque windows has transparent sub-parts such as title bar, the shadows, etc, Moki: paragraphs 3, 4, 6 and 9; Quartz's window server makes it easy to see the outlines and shadings of buttons and other window elements through the translucent title bars of inactive windows, Morgenstern: pg. 2 paragraph 3, figure 1).

Although Jaguar teaches the limitations as stated above, Jaguar does not explicitly teach rendering spectral highlights on the frame portion based on a virtual light source by the compositing desktop window manager configured to provide light effects. However, Solazzi teaches a 3D image (window frame) can display reflective and refractive characteristics ([0008]; it should be noted that the unit performing 3D modeling corresponds to compositing desktop window manager; it should be noted that Whitman defines spectral highlight as a bright reflection from a light source containing little or no detail; Solazzi teaches a 3D image can display reflective characteristics, and therefore the reflective characteristics of the 3D image of Solazzi also includes spectral highlights which is a bright reflection from a light source; spectral highlights correspond to lighting effects; therefore, compositing desktop window manager provides lighting

Art Unit: 2628

effects). Therefore, it would have been obvious to one of ordinary skill in art at the time of present invention to have 3D images with refractive characteristics as taught by Solazzi and apply into Jaguar because refractive properties added to the 3D image makes the image appear more realistic and reflective characteristics illustrate the ability of the object to reflect light ([0008], [0014]).

Although Jaguar, Solazzi and Whitman teach the limitations as stated above, they do not explicitly the compositing desktop window manager is configured to provide bump mapping and environment mapping. However, Fowler teaches OpenGL supports environment-mapped bump mapping (environment-mapped bump mapping corresponds to bump mapping and environment mapping, [0038-0039]). Therefore, it would have been obvious to one of ordinary skill in the art at the time of present invention to provide bump mapping and environment mapping as taught by Fowler to the method Jaguar, Solazzi and Whitman because such an approach will achieve a rendered surface whose appearance changes more realistically with lighting conditions ([0038]).

44. Claims 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaguar, in view of Solazzi, in view of Whitman, in view of Fowler, and further in view of Ben-Shachar et al. (US 2003/0189599; hereinafter Ben-Shachar).

45. Regarding claim 43, Jaguar teaches a computer implemented method for rendering a desktop window in a graphical user interface of an operating system shell, comprising: receiving, at a compositing desktop window manager (CDWM) (Quartz 2D,



Art Unit: 2628

OpenGL, QuickTime and Quartz compositor; Quartz compositor is just another OpenGL application, Roussel: page 118, section Quartz Compositor; receiving the application content is taught by Morgenstern: pg. 1 last paragraph, pg. 3 third and fourth paragraphs, and Siracusa: pg. 1 seventh paragraph, pg. 2 last line, pg. 3 first five lines and figure on pg. 3 and 4) application content in bottom-to-top order (video from VL is passed on to OpenGL by converting it into bottom-to-top orientation from top-to-bottom orientation, Portuesi: pg. 2-3) to display in a window (Quartz compositor takes information from the rendering component and writes it on the screen, Morgenstern: pg. 1 last paragraph); and displaying at least a portion of the application content in a content portion of the window having a frame portion (fully opaque window with transparent sub-parts, Moki: sixth paragraph; transparent sub-parts such as title bars, shadows, etc., Moki: sixth paragraph; translucent title bars of inactive windows, Morgenstern: pg. 2 third paragraph). Jaguar further teaches the compositing desktop window manager is configured to provide transparency and shadows (fully opaque windows has transparent sub-parts such as title bar, the shadows, etc, Moki: paragraphs 3, 4, 6 and 9; Quartz's window server makes it easy to see the outlines and shadings of buttons and other window elements through the translucent title bars of inactive windows, Morgenstern: pg. 2 paragraph 3, figure 1).

Although Jaguar teaches the limitations as stated above, Jaguar does not explicitly teach rendering refractive content on the frame portion based on the other discrete content behind the window in the graphical user interface by the compositing desktop window manager, which is configured to provide light effects. However, Solazzi

Art Unit: 2628

teaches a 3D image (window frame) can display reflective and refractive characteristics ([0008]; it should be noted that the unit performing 3D modeling corresponds to compositing desktop window manager; it should be noted that Whitman defines spectral highlight as a bright reflection from a light source containing little or no detail; Solazzi teaches a 3D image can display reflective characteristics, and therefore the reflective characteristics of the 3D image of Solazzi also includes spectral highlights which is a bright reflection from a light source; spectral highlights correspond to lighting effects; therefore, compositing desktop window manager provides lighting effects). Therefore, it would have been obvious to one of ordinary skill in art at the time of present invention to have 3D images with refractive characteristics as taught by Solazzi and apply into Jaguar because refractive properties added to the 3D image makes the image appear more realistic and reflective characteristics illustrate the ability of the object to reflect light ([0008], [0014]).

Although Jaguar, Solazzi and Whitman teach the limitations as stated above, they do not explicitly the compositing desktop window manager is configured to provide bump mapping and environment mapping. However, Fowler teaches OpenGL supports environment-mapped bump mapping (environment-mapped bump mapping corresponds to bump mapping and environment mapping, [0038-0039]). Therefore, it would have been obvious to one of ordinary skill in the art at the time of present invention to provide bump mapping and environment mapping as taught by Fowler to the method Jaguar, Solazzi and Whitman because such an approach will achieve a

Art Unit: 2628

rendered surface whose appearance changes more realistically with lighting conditions ([0038]).

Although Jaguar, Solazzi, Whitman and Fowler teach the limitations as stated above, they do not explicitly teach receiving the application content in reverse z-order. However, Ben-Shachar teaches exactly the same ([0061]; it should be noted that DT\_WINDLST packet containing a list corresponds to application content; it should be noted that the process proceeds through all windows in the windows list in reverse z-order). Therefore, it would have been obvious to one of ordinary skill in the art at the time of present invention to process through the windows list in reverse z-order as taught by Ben-Shachar and apply it to the method of Jaguar, Solazzi, Whitman and Fowler because treating the window information in such a manner will create the viewer display of shared window ([0061]).

46. Regarding claim 42, the statements presented above with respect to claims 1, 18 and 43 are incorporated herein.

47. Claims 2 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaguar, and further in view of Donham et al (US 6980209; hereinafter Donham).

48. Regarding claim 2, Jaguar teaches distorting content on top of which the frame portion is rendered (window can have shadow and a title bar; the shadow and title bar has a level of transparency associated with them, Moki: paragraph six and seven; contents underneath the translucent title bars of inactive windows can be seen, Morgenstern: pg. 2 paragraph three and fig. 1 and its description; it when a title bar is

Art Unit: 2628

translucent, blending needs to be performed on the title bar and contents of another window underneath the translucent title bar).

Although Jaguar teaches the limitations as stated, Jaguar does not explicitly teach a pixel shader is needed to perform the blending. However, Donham teaches a pixel shader that blends the texels with the color values of the pixels to be textured (col. 5 lines 25-35). Therefore, it would have been obvious to one of ordinary skill in art at the time of present invention to use a pixel shader to perform blending as taught by Donham into the method of Jaguar because a pixel shader combines pixel data and texture data to produce the combined pixel data (col. 5 lines 25-31).

49. Regarding claim 22, the statements presented above with respect to claims 21 and 2 are incorporated herein.

50. Claims 20, 40 and 45-48 rejected under 35 U.S.C. 103(a) as being unpatentable over Jaguar, in view of Farrah (US 2004/0030997), and further in view of Meagher (US 4694404).

51. Regarding claims 20, 40 and 45-47, Jaguar teaches the limitations as stated above, except that Jaguar does not explicitly teach receiving user input to resize the window and dividing the mesh into the three regions per mesh dimension. However, Farrah teaches to resize the window by dividing it into several equally sized and not equally sized regions based on the user input (fig. 21a-c, fig. 22a-c, [0225-0227], [0231-0235]; it should be noted that selecting the number of rows as "3" will divide the window in nine equal-sized regions; it should be noted that dividing window is functionally

Art Unit: 2628

equivalent to resizing the window; it should be noted that dividing window is functionally equivalent to resizing the window; it should be noted that the window is being divided along x and y dimensions). Therefore, it would have been obvious to one of ordinary skill in art at the time of present invention to divide a window mesh into several regions as taught by Farrah and apply it into the method of Jaguar because such regions are commonly used in computer programs which are used to generate artworks, drawings and flow charts ([0006]).

Although the combination of Jaguar and Farrah teach the limitations as stated above, they do not explicitly teach for each region, maintaining offsets of mesh vertices in any dimension by which the region is bounded by a bounding box of the window, and scaling mesh vertices in any dimension by which the region is not bounded by the bounding box of the window. However, Meagher shows offsets (maintaining offsets of mesh vertices) from each line correspond to vertices of each of the four windows, and the critical vertices for a window overlay selected from 3 x 3 array may be calculated by adding offsets (scaling the vertices) as a function of the value in x and y directions (fig. 6a-f, fig. 23a-e, col. 8 lines 31-51, col. 58 lines 64-67, col. 59 lines 1-15, col. 60 lines 3-21 and lines 56-67, col. 61 lines 1-17). Therefore, it would have been obvious to one of ordinary skill in art at the time of present invention to scale the vertices as taught by Meagher and apply it into the method of Jaguar and Farrah because such a method scales the three-dimensional universe relative to the three-dimensional coordinate system using the independent scaling factors for each of the x, y and z directions input by floating point multiplication on the microcomputer (col. 60 lines 56-60).

Art Unit: 2628

52. Regarding claim 48, although the combination of Jaguar and Farrah teach the limitations as stated above, they do not explicitly teach regions bounded by the bounding box are as small as necessary to encompass material that should not be scaled. However, Meagher teaches the bounding box of the node projection is the same size or smaller (in each dimension) as a window at that level depending on the size of the node projection as determined by the user specified scale factor (the size of the bounding box depends on the scale factor determined by the use, col. 44 lines 57-67, col. 45 lines 1-5). Therefore, it would have been obvious to one of ordinary skill in art at the time of present invention to have the bounding box size is determined by the scale factor as taught by Meagher and apply it into the method of Jaguar and Farrah because it helps to determine if the node projection intersects any non-full window in the current window overlay (col. 45 lines 6-10).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JWALANT AMIN whose telephone number is (571)272-2455. The examiner can normally be reached on 10:30 a.m. - 7:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on 571-272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2628

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kee M Tung/

Supervisory Patent Examiner, Art Unit 2628

/J. A./

Examiner, Art Unit 2628